PATENT ABSTRACTS OF JAPAN

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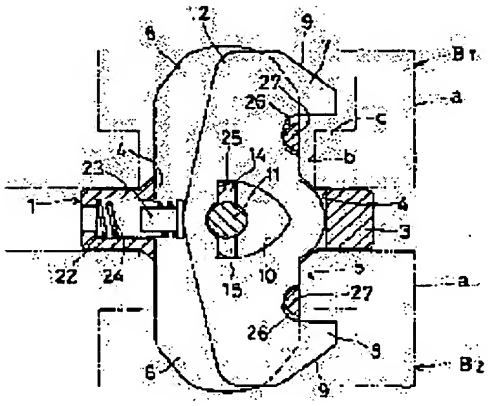
(54) CONTAINER CONNECTOR

(57)Abstract:

PURPOSE: To effect the engaging and releasing of a connector for coupling upper and lower containers together by rotating a single handle shaft.

CONSTITUTION: A spacer member 3 having square holes 4 is provided with a pair of upper inserting shafts 5 and a pair of lower inserting shafts 6 formed on the upper and lower surfaces thereof between the square holes 4. A latch member 2 insertable in the square holes 4 with its upper and lower end parts disposed between the inserting shaft pairs 5, 6, respectively, is provided on the upper and lower part of its front surface with an upper engaging pawl 7 and a lower engaging pawl 8, respectively, projecting outwardly from between the inserting shaft pairs 5, 6. A handle shaft 11 of the latch member 2 insertable in the square holes 4 and freely rotatably supported by the spacer member 3 is provided with an upper projecting shaft 14 and a lower projecting shaft 15. The latch member 2 is pressed by a spring 24 to force the inner surface of a window 10 against the handle shaft 11 and, by the rotation of the handle shaft 11, the latch member 2 is made to rock with the upper projecting shaft 14 or lower projecting shaft 15 urged against the inner surface of the window 10, whereby the engaging pawl 7 or 8 is made releasably engageable with a corner metal fitting (a) of a container.



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* NOTICES *

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Industrial Application] This invention relates to the connection implement of the container accumulated up and down.
[0002]
[Description of the Prior Art] Generally, when transporting many containers by sea-vessels, the container was accumulated up and down, the vertical container was connected with the connection implement, and load collapse is prevented.
[0003] What performs the connection and the deconcatenation to the inferior-surface-of-tongue corner metallic ornaments of an up container by rotation of the body of a connection implement as the above-mentioned container join implement, and it was made to perform with the cone which rotates the connection and the deconcatenation to the top-face corner metallic ornaments of a lower container by actuation of a handle on the other hand is known from the former.
[0004]
[Problem(s) to be Solved by the Invention] By the way, in order for rotation of the body of a connection implement to perform the connection and the deconcatenation to the inferior-surface-of-tongue corner metallic ornaments of an up container, when accumulating a container, in the above-mentioned conventional container join implement, it is necessary to attach a connection implement in the inferior-surface-of-tongue corner metallic ornaments of the container, and to load a container into them.
[0005] Moreover, to discharge and ship a container, it is necessary to cancel the connection to the top-face corner metallic ornaments of a lower container, and to hang an up container. Thus, in order that the conventional container join implement may perform loading of a container, and shipping and discharging in the condition of having connected with the up container and may moreover perform connection to the corner metallic ornaments of an up container by rotation of the body of a connection implement, there is risk of a connection implement falling at the time of migration of a container, and a problem is in safety at it.
[0006] Then, this invention solves the above-mentioned trouble and makes it the technical technical problem to raise the safety of the pile and the shipping-and-discharging activity of a container.
[0007]
[Means for Solving the Problem] In order to solve the above-mentioned technical problem, it sets to the 1st invention. The body of a connection implement which formed the square hole which penetrates spacing of a vertical container up and down to the spacing member held uniformly, set spacing of the above-mentioned square hole to the vertical side of a spacing member, and prepared the insertion shank of a pair, It is inserted in the above-mentioned square hole, and has the latch member which formed the engagement pawl in the vertical edge located between the insertion shanks of a pair. Prepare the aperture penetrated to a both-sides side in the above-mentioned latch member, it is inserted in the aperture, and both ends are supported free [rotation] by the above-mentioned spacing member. On the handle shaft which prepared the handle in the end section which projects outside from the periphery of a spacing member The convex shaft of the pair which makes a latch member rock to the location where the inside of an aperture is pressed at the time of rotation of the handle shaft, and an engagement pawl is settled between the insertion shafts of a pair is prepared. The configuration from which the engagement pawl of the pair of the latch member is equipped with the spring which deflects a latch member in the direction which projects outside between the insertion shafts of a pair, and changes to it was adopted.

[0008] Moreover, in order to enable it to hold one engagement pawl of a latch member in the engagement discharge condition, it sets to the 2nd invention. The spring which supports the above-mentioned handle shaft free [migration to shaft orientations], and presses the handle shaft in the direction of outside inside a spacing member A nest, The projection was prepared in the periphery of the part which penetrates the spacing member of a handle shaft, and the configuration which prepared the guide rail of the hoop direction to which it shows the rotation of the above-mentioned projection, and the engagement slot of the pair prolonged in the shaft orientations of a handle shaft succeeding the both ends of the guide rail was adopted as the spacing member.
[0009] Furthermore, in order to make easy connection to the corner metallic ornaments of a container, in the 3rd invention, the configuration which established the taper side in the end face of an engagement pawl was adopted.
[0010]
[Function] A latch member is made to rock and the engagement pawl of the latch member is made to engage and release the corner metallic ornaments of a container by rotation actuation of a handle in the container join implement in the 1st invention.
[0011] In the container join implement in the 2nd invention, in the condition of carrying out engagement discharge of one engagement pawl of a latch member to the corner metallic ornaments of a container by rotation actuation of a handle, a handle shaft is moved to shaft orientations by the elasticity of a spring, the baffle of the handle shaft is carried out and a latch member is held in the engagement discharge condition by engagement of the projection and engagement slot which were established in the handle shaft.
[0012] When a latch member is made to rock according to the operation whose inner circumference of the engagement hole pushes a taper side and the above-mentioned engagement pawl passes an engagement hole according to the activity which inserts the insertion shank of the pair of the body of a connection implement in the engagement hole of container corner metallic ornaments, a latch member is made to rock by the elasticity of a spring, and an engagement pawl is made to engage with corner metallic ornaments in the container join implement in the 3rd invention.
[0013]
[Example] Hereafter, the example of this invention is explained based on an accompanying drawing.
[0014] As shown in drawing 1 thru/or drawing 3 , the container join implement A concerning this invention has the body 1 of a connection implement, and the latch member 2.
[0015] The body 1 of a connection implement forms a square hole 4 in the tabular spacing member 3 which holds spacing of a vertical container uniformly, and is considered as the configuration which set spacing of the above-mentioned square hole 4 on the top face and inferior surface of tongue of the spacing member 3, and formed the up insertion shaft 5 of a pair, and the lower insertion shaft 6 of a pair in them.
[0016] It is made easy to make the up insertion shank 5 and the lower insertion shank 6 into the magnitude which can be inserted to the engagement hole b formed in the corner metallic ornaments a of a container, and to insert in the engagement hole b by making the point into a taper.
[0017] Said latch member 2 is inserted in the square hole 4 of a spacing member 3, and the vertical edge is arranged between the up insertion shafts 5 of a pair, and between the lower insertion shafts 6 of a pair.
[0018] The up engagement pawl 7 and the lower engagement pawl 8 are formed in the front vertical section of the latch member 2, and the taper side 9 is established in the top face of the up engagement pawl 7, and the inferior surface of tongue of the lower engagement pawl 8. Moreover, the aperture 10 penetrated to a both-sides side is formed in the latch member 2, and the both ends of the handle shaft 11 inserted in the aperture 10 are inserted in the axial insertion hole 12 formed in the spacing member 3, and are supported free [rotation].
[0019] A projection is prepared outside from the periphery of a spacing member 3, and, as for the end section of the handle shaft 11, the handle 13 is formed in the edge.
[0020] Moreover, the up convex shaft 14 and the lower convex shaft 15 are formed in the upper and lower sides of the periphery located in an aperture 10 at the handle shaft 11. In order to make the nest of the handle shaft 11 possible, the slot 16 of the pair which can insert convex shafts 14 and 15 in the inner circumference both sides of the axial insertion hole 12 is formed.
[0021] Furthermore, the projection 17 is formed in the periphery located in the axial insertion hole 12 at the handle shaft 11. On the other hand, the long engagement slot 19 is established in the spacing member 3 at the shaft orientations of the handle shaft 11 succeeding the both ends of the guide rail 18

and guide rail 18 of the hoop direction where the above-mentioned projection 17 fits into the inner circumference of the axial insertion hole 12.
[0022] The above-mentioned handle shaft 11 is pressed in the direction which escapes from and comes out of the axial insertion hole 12 with the spring 20 built into the lock out edge of the axial insertion hole 12. Here, since there is a possibility that the handle shaft 11 may slip out that it is in the condition which is in agreement with the projection 17 fang furrow 16 of the axial insertion hole 12 by press of a spring 20, the pin 21 which intersects perpendicularly with a slot 16 is attached in a spacing member 3, and the stop of the handle shaft 11 is escaped from and carried out by engagement of the pin 21 and projection 17.
[0023] The pin hole 22 is formed behind the latch member 2, and the spring 24 which pushes a pin 23 and this pin 23 against the latch member 2 in that pin hole 22 is built into the inner circumference of the square hole 4 of said spacing member 3. The flat side 25 formed in the inner circumference of an aperture 10 is forced on the convex shafts 14 and 15 of the handle shaft 11 by the elasticity of the above-mentioned spring 24. Moreover, the engagement pawls 7 and 8 of the latch member 2 are held at the condition of projecting between the up insertion shafts 5 of a pair, and outside between the lower insertion shafts 6 of a pair.
[0024] A notch 26 is formed, on the other hand, the above-mentioned notch 26 is countered at the inside of the up insertion shaft 5, and the inside of the lower insertion shaft 6, and the lobe 27 is formed in the vertical section of the front both sides of the latch member 2.
[0025] The engagement pawls 7 and 8 fit into the outside of a lobe 27 in the insertion shaft 5 of a pair, and the condition of projecting outside between six, and the latch member 2 is held for the notch 26 prepared in the latch member 2 by the fitting at a stable state.
[0026] The container join implement shown in the example consists of the above-mentioned structure, and inserts the up insertion shaft 5 or the lower insertion shaft 6 in the engagement hole b prepared in the corner metallic ornaments a on the occasion of connection of the connection implement A and corner metallic ornaments a of a container. Since the taper side 9 of the up engagement pawl 7 of the latch section 2 or the taper side 9 of the lower engagement pawl 8 is pushed by the inner skin of the engagement hole b at the time of the insertion, If the latch member 2 rocks and the up insertion shaft 5 or the lower insertion shaft 6 is completely inserted into the engagement hole b, the latch member 2 will rock by the elasticity of a spring 24, and the up engagement pawl 7 or the lower engagement pawl 8 will engage with the inside of the board c which has the engagement hole b. The connection implement A is connected with the corner metallic ornaments a by the engagement.
[0027] Therefore, the vertical container B1 and B-2 Connection is faced. The vertical container B1 and B-2 On the other hand, it is a container B1, for example, an up container. The connection implement A is connected with the inferior-surface-of-tongue corner metallic ornaments a. The up container B1 Lower container B-2 loaded previously beforehand It puts upwards and is the lower insertion shaft 6 of the connection implement A Lower container B-2 It inserts in the engagement hole b of the corner metallic ornaments a which can be set.
[0028] Drawing 2 and drawing 4 are the container B1 of the upper and lower sides with the container join implement A concerning this invention, and B-2. The condition of having connected is shown and the engagement pawls 7 and 8 of the upper and lower sides of the latch member 2 are engaging with the inside of the board c which has the engagement hole b.
[0029] A container B1 and B-2 On the occasion of shipping and discharging, connection of the connection implement A and the corner metallic ornaments a is canceled, and it is the up container B1. It pulls up. In this case, lower container B-2 Connection of the corner metallic ornaments a and the connection implement A may be canceled, or it is the up container B1. Connection of the corner metallic ornaments a and the connection implement A may be canceled.
[0030] On the occasion of a deconcatenation, the handle shaft 11 is rotated by actuation of a handle 13. For example, if a handle 13 is reduced and the handle shaft 11 is rotated, in order that the lower convex shaft 15 may press the flat side 25 of an aperture 10, the latch member 2 is rocked, and as shown in drawing 6 , engagement discharge of the lower engagement pawl 8 is carried out. Projection 17 counters the engagement slot 19 at the time of the engagement discharge, since the spring 20 is pressing the handle shaft 11, the handle shaft 11 moves to shaft orientations, and projection 17 engages with the engagement slot 19 (refer to drawing 7). The baffle of the handle shaft 11 is carried out by the engagement, and the lower engagement pawl 8 is held at the condition that engagement discharge was carried out.
[0031] Therefore, up container B1 By pulling up, the connection implement A is the up container B1.

It can pull up and is the up container B1. It can discharge.
[0032] On the occasion of removal of the connection implement A, stuff the handle shaft 11 into shaft orientations, reduce a handle 13, where alignment of projection 17 and the guide rail 18 is carried out, rotate the handle shaft 11, press the flat side 25 by the up convex shaft 14, the latch member 2 is made to rock, and engagement discharge of the up engagement pawl 7 is carried out.
[0033]
[Effect of the Invention] As mentioned above, in the container join implement concerning this invention, since an engagement pawl is formed up and down and it was made to make that engagement pawl engage and release the corner metallic ornaments of a container, a pile and shipping and discharging of an up container can be performed in the condition of the latch member rocked by rotation of a handle shaft of having made the connection implement connecting with the corner metallic ornaments of an up container, and it can work safely.
[0034] Moreover, if engagement discharge of the engagement pawl is carried out, since a projection can engage with an engagement slot, can carry out the baffle of the handle shaft and can hold an engagement pawl in the engagement discharge condition, an up container can be discharged [a projection is prepared in a handle shaft, and] in the container join implement which formed the engagement slot in the spacing member and shipped well.
[0035] Furthermore, in the container join implement which formed the taper side in the engagement pawl, since a taper side is pushed by the inner circumference of an engagement hole and a latch member rocks by it by inserting an insertion shaft in the engagement hole of corner metallic ornaments, a connection implement and corner metallic ornaments can be connected easily.

[Translation done.]

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CLAIMS

[Claim(s)]
[Claim 1] The body of a connection implement which formed the square hole which penetrates spacing of a vertical container up and down to the spacing member held uniformly, set spacing of the above-mentioned square hole to the vertical side of a spacing member, and prepared the insertion shank of a pair, It is inserted in the above-mentioned square hole, and has the latch member which formed the engagement pawl in the vertical edge located between the insertion shanks of a pair. Prepare the aperture penetrated to a both-sides side in the above-mentioned latch member, it is inserted in the aperture, and both ends are supported free [rotation] by the above-mentioned spacing member. On the handle shaft which prepared the handle in the end section which projects outside from the periphery of a spacing member The convex shaft of the pair which makes a latch member rock to the location where the inside of an aperture is pressed at the time of rotation of the handle shaft, and an engagement pawl is settled between the insertion shafts of a pair is prepared. The container join implement with which the engagement pawl of the pair of the latch member is equipped with the spring which deflects a latch member in the direction which projects outside between the insertion shafts of a pair, and grows into it.
[Claim 2] The container join implement which supported the handle shaft free [migration to shaft orientations], prepared the projection in the periphery of the part which penetrates the spacing member of a nest and a handle shaft for the spring which presses the handle shaft in the direction of outside inside a spacing member in the container join implement according to claim 1, and prepared the guide rail of the hoop direction which shows a spacing member to the rotation of the above-mentioned projection, and the engagement slot of the pair prolonged in the shaft orientations of a handle shaft succeeding the both ends of the guide rail.
[Claim 3] The container join implement which established the taper side in the end face of an engagement pawl in the container join implement according to claim 1 or 2.

[Translation done.]

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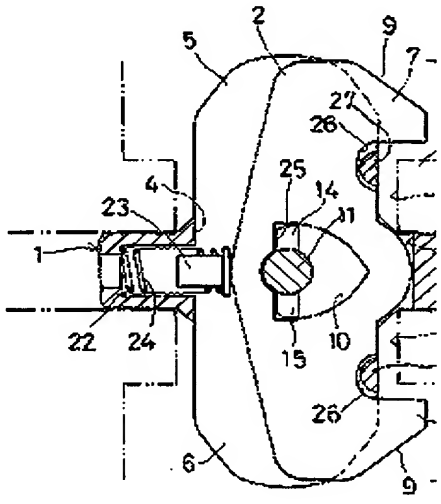
(54)【発明の名称】 コンテナ連結具

(57)【要約】
【目的】 上部コンテナと下部コンテナを連結する連結具の係合および係合解除を単一のハンドル軸の回転によって行なえる。
【構成】 角孔４を有するスペーサ部材３の上下面に角孔４の間隔をおいて一対の上部挿入軸５および一対の下部挿入軸６を形成する。角孔４内に挿入され、上下端部が一対の挿入軸５、６間に位置するラッチ部材２の前面上下に一対の挿入軸５、６間より外部に突出する上部係合爪７および下部係合爪８を設ける。ラッチ部材２の角孔４に挿入され、スペーサ部材３によって回転自在に支持されたハンドル軸１１に上部突軸１４および下部突軸１５を設ける。ラッチ部材２をスプリング２４で押圧して窓１０の内面をハンドル軸１１に押し付け、上記ハンドル軸１１の回転より、上部突軸１４又は下部突軸１５で窓１０の内面を押圧してラッチ部材２を揺動させ、係



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【特許請求の範囲】

【請求項１】　上下コンテナの間隔を一定に保持するスペーサ部材に上下に貫通する角孔を形成し、スペーサ部材の上下面に上記角孔の間隔をおいて一対の挿入軸部を設けた連結具本体と、上記角孔に挿通され、一対の挿入軸部間に位置する上下端部に係合爪を設けたラッチ部材とを有し、上記ラッチ部材には両側面に貫通する窓を設け、その窓に挿通されて両端部が上記スペーサ部材で回転自在に支持され、スペーサ部材の外周から外側に突出する一端部にハンドルを設けたハンドル軸には、そのハンドル軸の回転時に窓の内面を押圧して係合爪が一対の挿入軸間に納まる位置までラッチ部材を揺動させる一対の突軸を設け、そのラッチ部材の一対の係合爪が一対の挿入軸間より外側に突出する方向にラッチ部材を偏向させるスプリングを備えて成るコンテナ連結具。

【請求項２】　請求項１記載のコンテナ連結具において、ハンドル軸を軸方向に移動自在に支持し、そのハンドル軸を外方向に押圧するスプリングをスペーサ部材の内部に組込み、ハンドル軸のスペーサ部材を貫通する部分の外周に突起を設け、スペーサ部材には上記突起の回転移動を案内する周方向の案内溝と、その案内溝の両端に連続し、ハンドル軸の軸方向に延びる一対の係合溝とを設けたコンテナ連結具。

【請求項３】　請求項１又は２に記載のコンテナ連結具において、係合爪の端面にテーパ面を設けたコンテナ連結具。

【発明の詳細な説明】

【０００１】

【産業上の利用分野】この発明は、上下に積み重ねたコンテナの連結具に関するものである。

【０００２】

【従来の技術】一般に、多数のコンテナを船舶輸送する場合、コンテナを上下に積み重ね、その上下コンテナを連結具で連結して荷くずれを防止している。

【０００３】上記コンテナ連結具として、上部コンテナの下面コーナ金具に対する連結および連結解除を、連結具本体の回転によって行ない、一方、下部コンテナの上面コーナ金具に対する連結および連結解除をハンドルの操作によって回転するコーンによって行なうようにしたものが従来から知られている。

【０００４】

【発明が解決しようとする課題】ところで、上記従来のコンテナ連結具においては、上部コンテナの下面コーナ金具に対する連結および連結解除を連結具本体の回転によって行なうため、コンテナを積み重ねる場合、そのコンテナの下面コーナ金具に連結具を取付けてコンテナを

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来のコンテナ連結具は、上部コンテナ
でコンテナの積み込みおよび積みおろ
あり、しかも上部コンテナのコーナ金
連結具本体の回転によって行なうため
時に、連結具が落下する危険があり、
る。

【０００６】そこで、この発明は、上
し、コンテナの積み重ねおよび積みお
を高めることを技術的課題としている。

【０００７】

【課題を解決するための手段】上記の
めに、第１の発明においては、上下コ
定に保持するスペーサ部材に上下に貫
し、スペーサ部材の上下面に上記角孔
対の挿入軸部を設けた連結具本体と、
れ、一対の挿入軸部間に位置する上下
けたラッチ部材とを有し、上記ラッチ
貫通する窓を設け、その窓に挿通され
ペーサ部材で回転自在に支持され、ス
から外側に突出する一端部にハンドル
軸には、そのハンドル軸の回転時に窓
係合爪が一対の挿入軸間に納まる位置
揺動させる一対の突軸を設け、そのラ
係合爪が一対の挿入軸間より外側に突
チ部材を偏向させるスプリングを備え
したのである。

【０００８】また、ラッチ部材の一方
除状態に保持できるようにするため、
ては、上記ハンドル軸を軸方向に移動
のハンドル軸を外方向に押圧するスプ
部材の内部に組込み、ハンドル軸のス
する部分の外周に突起を設け、スペー
起の回転移動を案内する周方向の案内
の両端に連続し、ハンドル軸の軸方向
合溝とを設けた構成を採用したのであ

【０００９】さらに、コンテナのコー
結を容易とするため、第３の発明にお
端面にテーパ面を設けた構成を採用し

【００１０】

【作用】第１の発明におけるコンテナ
は、ハンドルの回動操作によってラッ
せ、そのラッチ部材の係合爪をコンテ
対して係脱させる。

【００１１】第２の発明におけるコン
ては、ハンドルの回動操作によってラ
係合爪をコンテナのコーナ金具に対し

【００１２】第３の発明におけるコンテナ連結具においては．連結具本体の一対の挿入舌部をコンテナコーナ金具の係合孔に挿入する作業によって．その係合孔の内周がテーパ面を押す作用によりラッチ部材を揺動させ、上記係合爪が係合孔を通過したとき、スプリングの弾力によりラッチ部材を揺動させて係合爪をコーナ金具に係合させる。

【００１３】

【実施例】以下．この発明の実施例を添付図面に基づいて説明する。

【００１４】図１乃至図３に示すように、この発明に係るコンテナ連結具Ａは、連結具本体１と、ラッチ部材２とを有する。

【００１５】連結具本体１は、上下コンテナの間隔を一定に保持する板状のスペーサ部材３に角孔４を形成し、そのスペーサ部材３の上面および下面に、上記角孔４の間隔をおいて一対の上部挿入舌５および一対の下部挿入舌６を設けた構成とされている。

【００１６】上部挿入舌部５および下部挿入舌部６は、コンテナのコーナ金具ａに形成された係合孔ｂに対して挿入可能な大きさとされ．その先端部をテーパとして係合孔ｂに挿入し易くしてある。

【００１７】前記ラッチ部材２はスペーサ部材３の角孔４に挿入されて上下端部が一対の上部挿入舌５間および一対の下部挿入軸６間に配置されている。

【００１８】ラッチ部材２の前面上下部には上部係合爪７および下部係合爪８が形成され、上部係合爪７の上面および下面にテーパ面９が設けられている。また、ラッチ部材２には両側面に貫通する窓１０が形成され、その窓１０に挿通されたハンドル舌１１の両端部は、スペーサ部材３に形成した軸挿入孔１２に挿入されて回転自在に支持されている。

【００１９】ハンドル舌１１の一端部はスペーサ部材３の外周から外側に突出し．その端部にハンドル１３が設けられている。

【００２０】また、ハンドル舌１１には、窓１０内に位置する外周の上下に上部突軸１４および下部突軸１５が設けられている。そのハンドル舌１１の組込みを可能とするため、舌挿入孔１２の内周両側に突舌１４．１５が挿通可能な一対の溝１６を設けてある。

【００２１】さらに、ハンドル舌１１には、舌挿入孔１２内に位置する外周に突起１７が設けられている。一方．スペーサ部材３には．軸挿入孔１２の内周に上記突起１７がはまる周方向の窓内溝１８と．その窓内溝１８の両端に連続し．ハンドル軸１１の軸方向に長い係合溝１９とが設けられている。

圧によってハンドル舌１１が舌挿入孔おそれがあるため、スペーサ部材３にるピン２１を取付け、そのピン２１とよってハンドル軸１１を抜け止めして

【００２３】前記スペーサ部材３の角ラッチ部材２の背部にピン孔２２が形孔２２内にピン２３と、このピン２３押し付けるスプリング２４とが組込まプリング２４の弾力によって、窓１０平坦面２５がハンドル舌１１の突舌１けられる。また．ラッチ部材２の係合の上部挿入舌５間および一対の下部挿に突出する状態に保持される。

【００２４】ラッチ部材２の前面両側欠部２６が形成され、一方．上部挿入下部挿入舌６の内面に上記切欠部２６２７が設けられている。

【００２５】ラッチ部材２に設けた切爪７．８が一対の挿入舌５．６間より感において突出部２７の外側に嵌合し．てラッチ部材２は安定状態に保持され

【００２６】実施例で示すコンテナ連から成り、その連結具Ａとコンテナの結に際しては．コーナ金具ａに設けら部挿入舌５又は下部挿入軸６を挿入すラッチ部２の上部係合爪７のテーパ面８のテーパ面９が係合孔ｂの内周面でッチ部材２が揺動し、上部挿入舌５又係合孔ｂ内に完全に挿入されると、ス力によりラッチ部材２が揺動し、上部係合爪８が係合孔ｂを有する板体ｃのその係合によってコーナ金具ａに連結る。

【００２７】したがって．上下コンテ結に際しては．上下コンテナＢ₁、Ｂ₂ナ．例えば上部コンテナＢ₁の下面コ具Ａを連結し．その上部コンテナＢ₁まれた下部コンテナＢ₂上に積み重ね挿入軸６を下部コンテナＢ₂における合孔ｂに挿入する。

【００２８】図２および図４は、この連結具Ａによって上下のコンテナＢ₁た状態を示し．ラッチ部材２の上下の合孔ｂを有する板体ｃの内面に係合し

【００２９】コンテナＢ₁．Ｂ₂の積は．連結具Ａとコーナ金具ａの連結を

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【００３０】連結解除に際しては、ハンドル１３の操作によってハンドル軸１１を回転する。例えば、ハンドル１３を引き下げてハンドル軸１１を回転すると、下部突軸１５が窓１０の平坦面２５を押圧するため、ラッチ部材２は揺動し、図６に示すように、下部係合爪８が係合解除される。その係合解除時、突起１７は係合溝１９に対向し、スプリング２０はハンドル軸１１を押圧しているため、ハンドル軸１１は軸方向に移動し、係合溝１９に突起１７が係合する（図７参照）。その係合によってハンドル軸１１が回り止めされ、下部係合爪８は係合解除された状態に保持される。

【００３１】したがって、上部コンテナB，を引き上げることにより、連結具Aは上部コンテナB，と共に引き上げられ、上部コンテナB，を積みおろすことができる。

【００３２】その連結具Aの取外しに際しては、ハンドル軸１１を軸方向に押し込み、突起１７と案内溝１８とを位置合わせした状態でハンドル１３を引き下げてハンドル軸１１を回転させ、上部突軸１４で平坦面２５を押圧してラッチ部材２を揺動させ、上部係合爪７を係合解除させる。

【００３３】

【発明の効果】以上のように、この発明に係るコンテナ連結具においては、ハンドル軸の回動によって揺動されるラッチ部材の上下に係合爪を設け、その係合爪をコンテナのコーナ金具に対して係脱させるようにしたので、上部コンテナのコーナ金具に連結具を連結させた状態で上部コンテナの積み重ねおよび積みおろしを行なうことができ、安全に作業することができる。

【００３４】また、ハンドル軸に突起を設け、スペーサ部材に係合溝を形成したコンテナ連結具においては、係合爪を係合解除すると、突起が係合溝に係合してハンドル軸を回り止めし、係合爪を係合解除状態に保持することができるため、上部コンテナの積みおろしを能率よく行なうことができる。

＊【００３５】さらに、係合爪にテーパ
テナ連結具においては、コーナ金具の
挿入することにより、係合孔の内周に
押され、ラッチ部材が揺動するため、
具とを容易に連結することができる。

【図面の簡単な説明】

【図１】この発明に係るコンテナ連結
す斜視図

【図２】図１の一部切欠正面図

【図３】図１の横断平面図

【図４】図３のIV－IV線に沿った断面

【図５】図３のV－V線に沿った断面

【図６】同上の作動状態を示す断面図

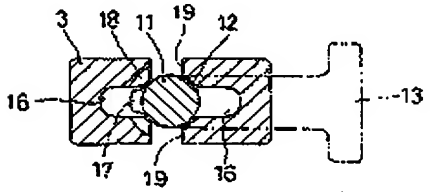
【図７】同上の係合溝と突起の係合状

【図８】図７の平面図

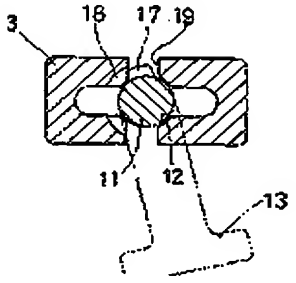
【符号の説明】

１　連結具本体
２　ラッチ部材
３　スペーサ部材
４　角孔
５　上部挿入軸
６　下部挿入軸
７　上部係合爪
８　下部係合爪
９　テーパ面
１０　窓
１１　ハンドル軸
１３　ハンドル
１４　上部突軸
１５　下部突軸
１７　突起
１８　案内溝
１９　係合溝
２４　スプリング

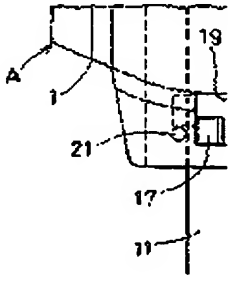
【図５】



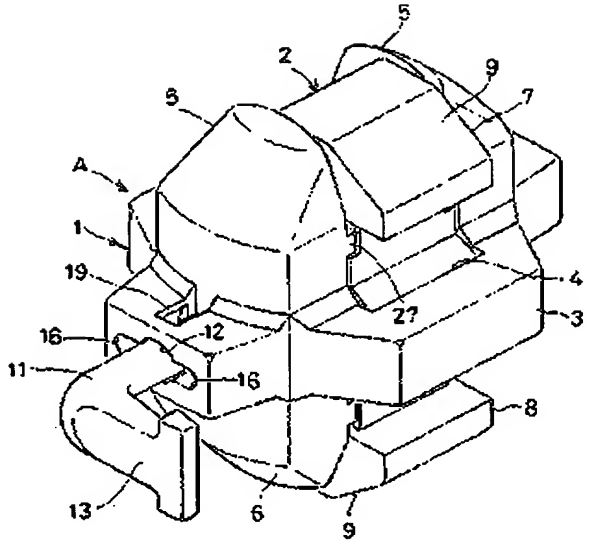
【図７】



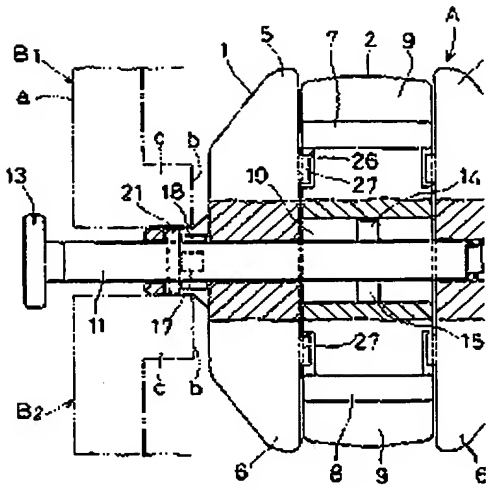
【図８



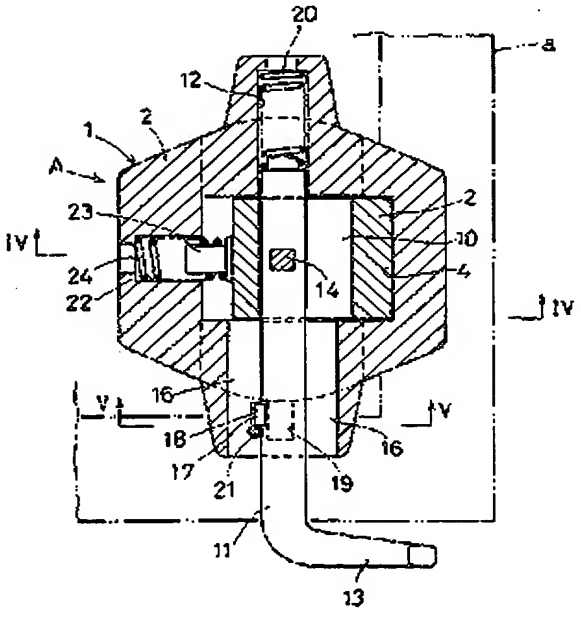
【図１】


5
2
9
7
5
A
1
19
4
27
3
16
12
11
16
8
13
6
9

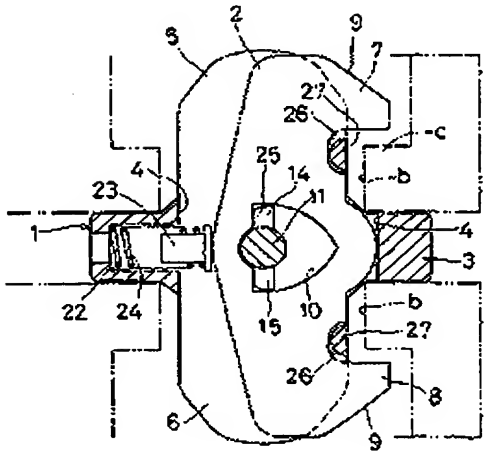
【図２】


A
B1
a
1
5
7
2
9
c
b
26
27
13
21
18
10
14
11
17
27
15
c
b
B2
6
8
9
6

【図３】


20
a
12
1
2
A
2
23
IV
10
24
4
14
22
IV
V
16
V
18
16
17
21
19
11
13

【図４】


2
9
5
7
27
26
c
4
25
14
b
23
11
1
4
3
22
24
15
10
b
27
26
8
6
9

【図6】